subtle, carefully nonlitiginous language) his pitch —for treatment of all the disorders we cannot cure (cancer, low back pain, arthritides and the like).

It will be a field day for charlatans; a bleak day for physicians; a black day for patients.

I do not know what the solution is—for helping patients find "good doctors." The same could be said for good lawyers, good architects and good plumbers. Selecting an expert is always a chancy business, and advertising is not the answer. I suspect that like so many other things in this world, one must do it in the marketplace by trial and error. Admittedly in the case of medicine this is risky. What we have is far from ideal, but the alternatives are far worse.

Let us hope the FTC weighs all factors before further propagating this simplistic solution to a difficult problem.

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Quality of Life

TO THE EDITOR: The quality of a physician's work is a reflection of the philosophy and ideas that motivate him. We have been told by great and noble men that reverence for life should be our guiding star. So we must ask the question, What is *life?* Is it a cell or group of cells carrying on the functions of respiration, digestion and excretion? Does it include bacteria, the prolific plankton of the seas, the hordes of insects that populate our planet, the rats and the mice that eat the farmers' grain, the fowl of the air and the beasts of the field? Do we worship at the throne of biology?

Nature has proven to be a wanton prodigal with much hatching and mitosing to permit the survival of a few samples of living things that in turn go about the business of reproduction in the endless cycle of living and dying. All of this activity is going on in a frenetic pattern often far below the level of awareness or intelligence. Is it really this physiologic activity that demands our allegiance and honor or is there something more important that demands our respect and obeisance? At what level of existence does life become meaningful and worthy of preservation? There is one product out of all this yeasty, budding, dividing and multiplying that demands reverence and enjoins our efforts at preservation. That product is intelligence—the ability to learn, evaluate, understand and love. Take it away and life is meaningless.

The real issue then is not whether we stepped on an ant, or swatted a fly, or ate a cow, but whether we ply our art or practice our trade or live our lives with intelligent compassionate understanding. Don't you agree, Dr. Schweitzer, wherever you are?

In our calling as physicians we are responsible to the human organism in a singular and peculiar way. We are concerned with the management of function of the biological machine. Like a mechanic with an oil-can and a wrench we tenderly grease and tighten the functioning parts, some physical, some psychic. We do not create intelligence nor do we assure quality to life. We service the machinery whereby man with his intelligence can find quality in life and for each man the quality goal may be different. To paraphrase an old bromide:

The physician says to man be free
Choose your life and what you will be
But this eternal truth is given
Life on earth is rarely Heaven
When vim and vigor become depleted
Doctor is in: Please be seated.

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Medicine Should Lead

TO THE EDITOR: THE WESTERN JOURNAL OF MEDICINE has an impressive record in addressing political, social and philosophical issues in the past few months.[1-4] I am very happy that the WESTERN JOURNAL has had the courage to address controversial areas. It is hard to see concrete change on the basis of editorializing. It is the more unfortunate because, as you have pointed out, physicians are still the most highly respected professionals in the United States. As a group, physicians are highly intelligent, articulate and well trained. Why, then, the irony that physicians are a weaker political force than, say, the Teamsters' union? Actually, it is fairly apparent. Training to be a physician leaves little time for political activity and even less for keeping up in the Arts. (It is a marvel that so many physicians manage to have outside talents, in spite of this.) Once through with training, now that a nonpolitical pattern has been established, physicians seldom get politically involved. Of course, a busy medical

practice makes it more difficult. Furthermore, physicians are individually fiercely independent. This makes it doubly difficult for anyone to lead a group of physicians. Consequently, less benevolent "interest groups" have more punch.

To change this it is first necessary to point out these facts and to realize the potential of Medicine as a leading force. Then it will be necessary to see the importance of exercising this potential in using medical expertise in directing our society. Finally, the process must start in medical school, where this potential and responsibility to society should be emphasized. The medical profession does have a responsibility to lead: to lead towards a cleaner, healthier environment; to lead towards personal responsibility in preventing self-inflicted disease (alcoholism, cigarette smoking, occupational disease). Part of health is mental health and part of mental health is happiness; Medicine should focus more on the social determinants of health and happiness.

Now is the time and the medical profession has the power and the responsibility to lead.

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REFERENCES

1. Another "war" for independence (Editorial). West J Med 125:490-491, Dec 1976
2. A broader knowledge base for medicine (Editorial Essay). West J Med 125:383-384, Nov 1976
3. Medical care as a social enterprise (Editorial). West J Med 125:148-149, Aug 1976
4. Another approach to health care problems (Editorial Essay). West J Med 125:310-311, Oct 1976

Carcinogenicity of Fibrous Glass

TO THE EDITOR: There recently appeared in THE WESTERN JOURNAL OF MEDICINE [125:485, Dec 1976] a short scientific communication (epitome) by Jean Felton, MD, titled "Fiberglass—Not Carcinogenic." This note may do a disservice to the uninitiated in reporting this material as "biologically innocuous." This subject area should have been more critically reviewed.

The literature has numerous references attesting to the carcinogenicity of fibrous glass in experimental investigation. This has been established in a number of recent animal studies utilizing different routes of administration and fiber types. The work of Pott and Friedrichs (1974),[1] Stanton and Wrench (1972),[2] and Wagner, Berry and Skidmore (1974)[3] have demonstrated the ability of various forms of fibrous glass to induce malignant tumors in laboratory animals. Utilizing methods of surgical implantation, intraperitoneal and intrapleural inoculation of fibrous glass, tumors were developed in rats similar to those observed in asbestos-exposed animals and man.

These investigations are of importance because these materials are being increasingly used, particularly as a substitute for asbestos. There is also increasing use of narrow diameter (.05-3μm) fibers for thermal insulation and other products. These fibers are eminently respirable, durable and may represent the physical structure found most carcinogenic in animal experiments (Stanton 1974).[5,6] The assertion that contemporary work substantiates the classification of this material as inert is unsupported.[7-11] Questions of carcinogenicity of fibrous glass are unresolved and are, indeed, under very active study at this time (International Agency for Research Against Cancer, for example). This is largely due to the recent introduction of long, narrow fibers into the workplace and environment. Both fiber-induced fibrosis and carcinogenicity require long latent periods; for example, for mesothelioma usually more than 30 years. Epidemiological studies to date have had methodologic shortcomings and have dealt with workers exposed to thicker and therefore less respirable fibers.

We are concerned that fine fibrous glass fibers may be inhaled, migrate to the pleura and exert a carcinogenic effect in man exactly like asbestos and that fibrous glass may act as a lung cocarcinogen with cigarette smoke and other carcinogens. We are not convinced that fibrous glass does not have a cellular toxic effect on alveolar macrophages and pulmonary living cells that may lead to fibrosis.

That fibrous glass may be biologically hazardous if inhaled into the lung is a potentially important problem which deserves extensive and urgent study.

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REFERENCES

1. Pott F, Huth F, Friedrichs KH: Tumorigenic effect of fibrous dusts in experimental animals. Environ Health Perspect 19:313-315, Dec 1974
2. Stanton MF, Wrench C: Mechanisms of mesothelioma induction with asbestos and fibrous glass. J Natl Cancer Inst 48: 797-816, Mar 1972
3. Wagner JC, Berry J, Skidmore JW: Studies of the carcinogenic effects of fiber glass of different diameters following intrapleural inoculation in experimental animals, *In* Symposium on Occupational Exposure to Fibrous Glass. NIOSH, CDC, DHEW, Washington, DC, 1974, pp 193-197
4. Dement JM: Environmental aspects of fibrous glass production and utilization. Environ Res 9:295-317, Jun 1975
5. Stanton MF: Fiber carcinogenesis: Is asbestos the only